

CLAIM AMENDMENTS

1 1. (currently amended) A method for the thermal
2 treatment of powder paints of any shade applied to substrates for
3 the preparation of a coating on the substrates using IR radiation,
4 characterized in that the powder paint applied to the substrate is
5 irradiated with medium- and/or long-wave IR radiation, and that the
6 powder paint contains additives with the characteristic of
7 absorbing medium- and/or long-wave IR radiation, and that the
8 powder paint which has been thermally treated with medium- and/or
9 long-wave IR radiation is optionally subjected to further treatment
10 with electron or UV radiation.

1 2. (currently amended) The method according to claim 1,
2 characterized in that the powder paint is irradiated with a medium-
3 and/or long-wave IR radiation with a wavelength range of 2 to
4 12 μm .

1 3. (currently amended) The method according to claim 1
2 [[or 2]], characterized in that the medium- and/or long-wave IR
3 radiation has a maximum radiation flux density at wavelengths of
4 > 2.0 μm .

1 4. (currently amended) The method according to claim 3,
2 characterized in that the maximum radiation flux density of the

3 medium- and/or long-wave IR radiation is at wavelengths in the
4 range of 2.0 to 9.0 μm , especially preferably between 2.0 and 6 μm .

1 5. (currently amended) The method according to ~~one of~~
2 ~~claims~~ claim 1 [[to 4]], characterized in that the additive with
3 the characteristic of absorbing medium- and/or long-wave IR
4 radiation which is contained in the powder paint is antimony tin
5 oxide and/or indium tin oxide.

1 6. (currently amended) The method according to ~~one of~~
2 ~~claims~~ claim 1 [[to 4]], characterized in that the additive with
3 the characteristic of absorbing medium- and/or long-wave IR
4 radiation which is contained in the powder paint is zinc
5 antimonate, vanadium oxide, tin oxide.

1 7. (currently amended) The method according to ~~one of~~
2 ~~claims~~ claim 1 [[to 4]], characterized in that the additives with
3 the characteristic of absorbing medium- and/or long-wave IR
4 radiation which are contained in the powder paint are C nanotubes
5 and/or C nanofibers.

1 8. (currently amended) The method according to claim 7,
2 characterized in that the C nanotubes and/or C nanofibers are
3 contained in a quantity in the range of 0.01 wt.% with respect to
4 the total powder paint formulation.

1 9. (currently amended) The method according to ~~one of~~
2 ~~claims claim~~ 1 [[to 4]], characterized in that the additives with
3 the characteristic of absorbing medium- and/or long-wave IR
4 radiation which are contained in the powder paint are rare-earth
5 metals and/or oxides of the rare-earth metals or mixtures thereof.

1 10. (currently amended) The method according to claim
2 9, characterized in that ytterbium oxide and/or neodymium oxide are
3 contained in the powder paint as additives with the characteristic
4 of absorbing medium- and/or long-wave IR radiation.

1 11. (currently amended) The method according to claim
2 10, characterized in that ytterbium oxide and/or neodymium oxide
3 are contained in the powder paint in a quantity of 2.5 wt.% each
4 with respect to the total powder paint formulation.

1 12. (currently amended) The method according to ~~one of~~
2 ~~claims claim~~ 1 [[to 4]], characterized in that the additives with
3 the characteristic of absorbing medium- and/or long-wave IR
4 radiation which are contained in the powder paint are organic
5 substances with a component of hydroxyl groups which is at least
6 0.5 hydroxyl groups per C atom.

1 13. (currently amended) The method according to claim
2 12, characterized in that the organic substances are carbohydrates
3 such as cellulose fibers or powder, starch, lactose.

1 14. (currently amended) The method according to claim
2 12, characterized in that the organic substances are polyalcohols
3 such as pentaerythrite, di-pentaerythrite.

1 15. (currently amended) The method according to ~~one of~~
2 ~~claims~~ claim 1 [[to 14]], characterized in that the substrate on
3 which the applied powder paint is irradiated with medium- and/or
4 long-wave IR radiation is three-dimensional.

1 16. (currently amended) The method according to ~~one of~~
2 ~~claims~~ claim 1 [[to 15]], characterized in that the substrate on
3 which the applied powder paint is irradiated with medium- and/or
4 long-wave IR radiation is made of thermally insulating material
5 with a thermal conductivity of between 0.05 and 5 W/mK.

1 17. (currently amended) The method according to ~~one of~~
2 ~~claims~~ claim 1 [[to 16]], characterized in that the substrate on
3 which the applied powder paint is irradiated with medium- and/or
4 long-wave IR radiation is made of heat-sensitive material.